

What is claimed is:

1. A method for the manufacture of an objective lens used for recording or reproducing optical information comprising a step of press molding a molding material that was premolded to a prescribed shape and is in a heated and softened state by using a pair of upper and lower molds having opposing molding surfaces, wherein

said objective lens is a lens which has a convex aspherical surface at the first surface and a numerical aperture NA satisfying the condition

$$NA \geq 0.8,$$

the method comprises a step of transferring a molding surface shape by using a spherical molding material with a radius r and pressing the molding material between a pair of upper and lower molds, and

the paraxial curvature radius R of the convex aspherical surface satisfies the following relation:

$$r/R \leq 1.35.$$

2. A manufacturing method for an objective lens according to claim 1, wherein the aforementioned r and the paraxial curvature radius R of the convex aspherical surface satisfy the following relation

$$1.0 \leq r/R \leq 1.3.$$

3. A manufacturing method for an objective lens according to claim 1 or claim 2, wherein the optical magnification of the objective lens with respect to a standard wavelength is zero.

4. A manufacturing method for an objective lens according to any of claims 1-3, wherein

the focal distance, f (mm), of the objective lens satisfies the following relation:

$$0.5 \leq f \leq 2.1.$$

5. A manufacturing method for an objective lens according to any of claims 1-4, wherein the axial wavefront aberration of the objective lens at a standard wavelength λ is $0.04\lambda_{\text{rms}}$ or less.

6. A manufacturing method for an objective lens according to any of claims 1-5, wherein the objective lens is composed of an optical glass which has a refractive index n of 1.65 or more, an Abbe number v_d of 40 or more, and a yield temperature T_s of 650°C or less.

7. An objective lens for recording and reproducing optical information which has a convex aspherical surface at the first surface and a numerical aperture NA satisfying the condition

$$NA \geq 0.8,$$

this lens being a mold pressed lens in which the relationship

$$1.0 \leq r/R \leq 1.35$$

is valid between a paraxial curvature radius R of the convex aspherical surface and r satisfying the following formula

$$(4/3)\pi r^3 = V$$

where V stands for a volume of the objective lens.